

Application No.: 10/596,826
Filing Date: June 26, 2006

AMENDMENTS TO THE CLAIMS

Please amend Claims as follows. Insertions are shown underlined while deletions are struck through

1-20. (Canceled)

21. (New) A process for producing a polymer, which comprises a step of carrying out photopolymerization of at least one photopolymerizable polymerization precursor containing a photocurable compound having two or more unsaturated bonds by irradiation with active energy ray in a supercritical fluid or subcritical fluid in the presence of at least one additive component comprising at least one organometal complex for adding a polymer function to produce a polymer having juts containing the additive component.

22. (New) The process for producing a polymer according to Claim 21, wherein the additive component is at least one organoplatinum complex.

23. (New) The process for producing a polymer according to Claim 21, wherein the supercritical fluid or subcritical fluid is supercritical carbon dioxide or subcritical carbon dioxide.

24. (New) The process for producing a polymer according to Claim 21, wherein the polymer having juts is formed on an active energy ray-permeable base material so disposed as to be exposed to the supercritical fluid or subcritical fluid.

25. (New) The process for producing a polymer according to Claim 24, wherein the active energy ray-permeable base material is so disposed that an incident surface for active energy ray of the base material is not exposed to the supercritical fluid nor subcritical fluid, and the exiting surface for active energy ray of the base material is exposed to the supercritical fluid or subcritical fluid, and,

the photopolymerization of at least one photopolymerizable polymerization precursor containing the photocurable compound having two or more unsaturated bonds is carried out by irradiation with active energy ray while permeating through the active energy ray-permeable base material to form the polymer having juts on the exiting surface for active energy ray of the active energy ray-permeable base material.

26. (New) The process for producing a polymer according to Claim 25,

wherein the irradiation with active energy ray onto the active energy ray-permeable base material is conducted via a mask pattern to selectively form the polymer having juts on a part of the exiting surface for active energy ray of the active energy ray-permeable base material wherein the active energy ray was permeated through the part.

27. (New) A polymer having juts, which contains at least one additive component comprising at least one organometal complex for adding a polymer function.

28. (New) The polymer according to Claim 27, wherein the height of juts is 0.1-fold or more of the diameter of the juts and the height of juts is 10 nm or more.

29. (New) A structure containing the polymer having juts according to Claim 27 on a base material.

30. (New) A polymer having juts and containing a metal and/or metal oxide, which was produced by reducing treatment of the polymer having juts according to Claim 27.

31. (New) A membrane containing a metal and/or metal oxide as a main component, which was produced by calcining treatment of the polymer having juts according to Claim 27.